

## DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

(X) Original

() Supplemental

( ) Substitute

0 PCT

As below named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below next to our names.

We believe we are original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the "PROCESS FOR PREPARING AN EXFOLIATED, HIGH I.V. POLYMER NANOCOMPOSITE WITH AN OLIGOMER RESIN PRECURSOR AND AN ARTICLE PRODUCED THEREFROM", which is described and claimed in the specification

(check one) [ ] which is attached hereto, or  
[X] which was filed on July 15, 1999, as United States Application No. 09/354,205 and  
with amendments through (if applicable), or  
[ ] an International Application No. PCT\_\_\_\_\_, filed \_\_\_\_\_, and as  
amended on \_\_\_\_\_ (if applicable).

We hereby state that we have reviewed and understand the contents of the above- identified specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose all information known by us to be material to the patentability of the claims of this application in accordance with Title 37, Code of Federal Regulations, §1.56.

We hereby claim foreign and/or international priority benefits under Title 35, United States Code, §§ 119 and/or 365 of any foreign application(s) for patent, inventor's certificate and/or PCT application listed below and have also identified below any foreign application for patent or inventor's certificate relating to this subject matter having a filing date before that of the application on which priority is claimed:

PRIOR FOREIGN APPLICATIONS: (ENTER BELOW IF APPLICABLE)			PRIORITY CLAIMED (MARK APPROPRIATE BOX BELOW)	
APP. NUMBER	COUNTRY	DAY/MONTH/YEAR FILED	YES	NO

We hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

ATTORNEY DOCKET NO.: 05015.0265  
PATENT

APPLICATION NUMBER	FILING DATE
60/111,202	December 7, 1998

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, we acknowledge the duty to disclose all information known by us to be material to the patentability of the claims of this application as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS (MARK APPROPRIATE COLUMN BELOW)		
		PATENTED	PENDING	ABANDONED

We hereby appoint the following attorneys and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

We hereby appoint the following attorneys and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Rose M. Allen	Reg. No. 35,424	Karen A. Harding	Reg. No. 33,967
Michael J. Blake	Reg. No. 37,096	Charles R. Martin	Reg. No. 25,002
Betty J. Boshears	Reg. No. 33,864	Matthew W. Smith	Reg. No. 35,366
Bernard J. Graves	Reg. No. 33,239	Cheryl J. Tubach	Reg. No. 38,346
Harry J. Gwinnell	Reg. No. 29,000	Jonathan D. Wood	Reg. No. 39,076

And

William H. Needle	Reg. No. 26,209	LaVonda R. DeWitt	Reg. No. 40,396
Sumner C. Rosenberg	Reg. No. 28,753	Matthew D. Josephic	Reg. No. 43,699
David G. Perryman	Reg. No. 33,428	David S. Kerven	Reg. No. 43,712
Mitchell A. Katz	Reg. No. 33,919	Janice A. Kimpel	Reg. No. 42,734
Gregory J. Kirsch	Reg. No. 35,572	Tina W. McKeon	Reg. No. 43,791
Gwendolyn D. Spratt	Reg. No. 36,016	Mary L. Miller	Reg. No. 39,303
Nagendra Setty	Reg. No. 38,300	Mark A. Murphy	Reg. No. 42,915
D. Andrew Floam	Reg. No. 34,597	Lisa A. Samuels	Reg. No. 43,080
William R. Johnson	Reg. No. 32,875	Clark G. Sullivan	Reg. No. 36,942
Allan G. Altera	Reg. No. 40,274	Lawrence A. Villanueva	Reg. No. 43,968
Bryan W. Bockhop	Reg. No. 39,613		
Kean J. DeCarlo	Reg. No. 39,954		

ATTORNEY DOCKET NO.: 05015.0265  
PATENT

Address all telephone calls to Mitchell A. Katz at telephone no. (404) 688-0770.

Address all correspondence to:

Mitchell A. Katz  
NEEDLE & ROSENBERG, P.C.  
Suite 1200, The Candler Building  
127 Peachtree Street, N.E.  
Atlanta, Georgia 30303-1811

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor: John Walker Gilmer

Inventor's signature: John Walker Gilmer Date: 6 Aug 1999  
Residence: 2624 Wildwood Drive, Kingsport, Tennessee 37660-4754  
Post Office Address: Same as above  
Citizenship: USA

Full name of second inventor: James Christopher Matayabas, Jr.

Inventor's signature: James Christopher Matayabas, Jr. Date: August 6, 1999  
Residence: 3429 Wesley Road, Kingsport, Tennessee 37664-4048  
Post Office Address: Same as above  
Citizenship: USA

Full name of third inventor: Gary Wayne Connell

Inventor's signature: Gary Wayne Connell Date: August 6, 1999  
Residence: 212 Gilda Avenue, Church Hill, Tennessee 37642-3101  
Post Office Address: Same as above  
Citizenship: USA

ATTORNEY DOCKET NO.: 05015.0265  
PATENT

Full name of fourth inventor: Jeffrey Todd Owens

Inventor's signature: Jeffrey Todd Owens Date: 6-Aug. 1999  
Residence: 117 Willowbrook Drive, Kingsport, Tennessee 37660-7581  
Post Office Address: Same as above  
Citizenship: USA

Full name of fifth inventor: Sam Richard Turner

Inventor's signature: Sam R. Turner Date: 9-Aug. 1999  
Residence: 1037 Sussex Drive, Kingsport, Tennessee 37660-5836  
Post Office Address: Same as above  
Citizenship: USA

Full name of sixth inventor: Rodney Layne Piner

Inventor's signature: Rodney Layne Piner Date: 6-Aug. 1999  
Residence: 202 Hidden Acres Road, Kingsport, Tennessee 7664  
Post Office Address: Same as above  
Citizenship: USA

W030460

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assignee: University of South Carolina  
Research Foundation

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REVOCATION AND APPOINTMENT OF POWER OF ATTORNEY

Commissioner of Patents  
Washington, D.C. 20231

Dear Sir:

The Assignee hereby revokes all previous powers of attorney and/or authorizations of agent given in the patent applications identified on the attached **Schedule A**, and hereby appoints Troutman Sanders LLP, having a Customer Number of 006980, and the attorneys and agents that are associated with this Customer Number from time to time, to prosecute these patent applications and transact all business in the Patent and Trademark Office connected with the pending applications. Please address all future correspondence regarding the patent applications identified in the attached **Schedule A** to:

Todd Deveau  
Troutman Sanders LLP  
600 Peachtree Street, N.E.,  
Suite 5200, Atlanta, Georgia 30308-2216  
(phone: 404-885-3000)

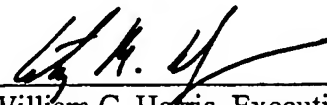
I am the authorized agent of the Assignee-of-record in the patent matters of **Schedule A**.

Respectfully submitted,

Date:

10/01/02

By:

  
~~William C. Morris, Executive Director~~  
UNIVERSITY OF SOUTH CAROLINA  
RESEARCH FOUNDATION

Anthony M. Boccanfuso, Ph.D.  
Managing Director

**SCHEDULE A**

<b>Serial No.</b>	<b>Filing Date</b>	<b>Title</b>	<b>Docket No.</b>
09/338,222	6/22/1999	Nanocomposites for High Barrier Applications	USC3.CIP
10/092,128	3/ 6/2002	Process for Preparing High Barrier Nanocomposites	USC3.CIP.CON2
09/354,205	7/15/1999	Process for Preparing an Exfoliated, High I.V. Polymer Nanocomposite with an Oligomer Resin Precursor and an Article Produced Therefrom	USC7
10/145,833	5/14/2002	Process for Preparing an Exfoliated, High I.V. Polymer Nanocomposite With an Oligomer Resin Precursor and an Article Produced Therefrom	USC7.CON
10/198,916	7/19/2002	Process for Preparing an Exfoliated, High I.V. Polymer Nanocomposite with an Oligomer Resin Precursor and an Article Produced Therefrom	USC7.CON2
09/451,549	12/ 1/1999	A Polymer/Clay Nanocomposite Having Improved Gas Barrier Comprising a Clay Material With a Mixture of Two or More Organic Cations and a Process for Preparing Same	USC8
10/072,759	2/ 8/2002	Polymer/Clay Nanocomposite Comprising a Functionalized Polymer or Oligomer and a Process for Preparing Same	USC9.CON
09/452,317	12/ 1/1999	A Colorant Composition, a Polymer Nanocomposite Comprising the Colorant Composition and Articles Produced Therefrom	USC11
09/452,826	12/ 1/1999	A High Barrier Amorphous Polyamide-Clay Nanocomposite and a Process for Preparing Same	USC13
10/144,427	5/13/2002	Process for Preparing a High Barrier Amorphous Polyamide-Clay Nanocomposite	USC13.CON
09/593,905	6/14/2000	A Polymer Nanocomposite Comprising a Layered Clay Material Modified with an Alkoxylated Onium	USC14

**SCHEDULE A (cont'd)**

09/583,120	5/30/2000	A Polymer Nanocomposite Comprising a Maxtrix Polymer and a Layered Clay Material Having A Low Quartz Content	USC15
09/452,319	12/ 1/1999	A Polymer/Clay Nanocomposite Comprising a Clay Treated with a Mixture of Two or More Onium Salts and a Process for Making Same	USC10
09/870,929	5/30/2001	A Polymer Nanocomposite Comprising a Matrix Polymer and a Layered Clay Material Having a Decreased Level of Extractable Material	USC17
09/728,954	12/ 1/2000	A Polymer-Clay Nanocomposite Comprising an Amorphous Polymer or Oligomer	USC16
60/111,202	12/ 7/1998	Preparation of Highly Exfoliated Polyamide Nanocomposites with Oligomer Precursor	USC7.PR.V
09/452,318	12/ 1/1999	A Polymer/Clay Nanocomposite Comprising a Clay Mixture and a Process for Making Same	USC12

## ASSIGNMENT

WHEREAS, EASTMAN CHEMICAL COMPANY, a Delaware corporation having an office at 100 North Eastman Road, Kingsport, Tennessee 37660, United States of America, is the owner of the entire right, title and interest in United States Patent Applications listed on Schedule A (attached) and the respective inventions disclosed therein;

AND WHEREAS UNIVERSITY OF SOUTH CAROLINA RESEARCH FOUNDATION, a non-profit educational and research institution having a place of business at 901 Sumter Street, 514 Byrnes Building, Columbia, South Carolina 29208, United States of America, is desirous of acquiring the entire right, title and interest in and to said United States Patent Application(s) and respective inventions disclosed therein.

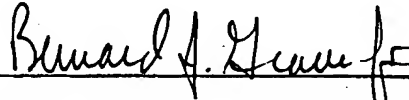
NOW, THEREFORE, for and in consideration of the sum of one dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, said EASTMAN CHEMICAL COMPANY has sold, assigned and transferred, and does hereby sell, assign and transfer to said UNIVERSITY OF SOUTH CAROLINA RESEARCH FOUNDATION, said United States Patent Application(s) and the inventions of the foregoing, the same to be held and enjoyed by UNIVERSITY OF SOUTH CAROLINA RESEARCH FOUNDATION for its own use and enjoyment and the use and enjoyment of its successors, assigns or other legal representatives, to the end of the term or term for which said patents are granted or reissued or extended as fully and entirely as the same would have been held and enjoyed by EASTMAN CHEMICAL COMPANY if this assignment and sale had not been made, as assignee of the entire right, title and interest therein and in and to all income, royalties, damages and payments now or hereafter due or payable with respect thereto in and to all causes of action (either in law or in equity) and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment.

EASTMAN CHEMICAL COMPANY covenants that it has full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreements inconsistent herewith.



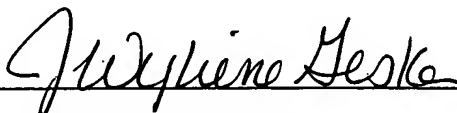
IN TESTIMONY WHEREOF, EASTMAN CHEMICAL COMPANY has caused this Assignment to be executed by its duly authorized officers this 20th day of June, 2002.

EASTMAN CHEMICAL COMPANY

  
\_\_\_\_\_  
Bernard J. Graves, Jr., Assistant Secretary  
and Assistant General Counsel

ATTESTATION OF WITNESS

I, J. Wyliene Geska, whose full post office address is  
443 Andover Court, Kingsport, TN 37663, U.S.A.  
was personally present and did see Bernard J. Graves, Jr., who is personally known to me,  
execute the above assignment.

  
\_\_\_\_\_  
Signature of Witness

## SCHEDULE A

### United States Patent Applications

Application No.	Filing Date	Title
09/338,222-	22 June 1999	NANOCOMPOSITES FOR HIGH BARRIER APPLICATIONS
09/354,205	15 July 1999	PROCESS FOR PREPARING AN EXFOLIATED, HIGH I.V. POLYMER NANOCOMPOSITES WITH AN OLIGOMER RESIN PRECURSOR AND AN ARTICLE PRODUCED THEREFROM
09/451,549	01 December 1999	A POLYMER/CLAY NANOCOMPOSITE HAVING IMPROVED GAS BARRIER COMPRISING A CLAY MATERIAL WITH A MIXTURE OF TWO OR MORE ORGANIC CATIONS AND A PROCESS FOR PREPARING SAME
09/452,319	01 December 1999	A POLYMER/CLAY NANOCOMPOSITE COMPRISING A CLAY TREATED WITH A MIXTURE OF TWO OR MORE ONIUM SALTS AND A PROCESS FOR MAKING SAME
09/452,317	01 December 1999	A COLORANT COMPOSITION, A POLYMER NANOCOMPOSITE COMPRISING THE COLORANT COMPOSITION AND ARTICLES PRODUCED THEREFROM
09/452,318	01 December 1999	A POLYMER/CLAY NANOCOMPOSITE COMPRISING A CLAY MIXTURE AND A PROCESS FOR MAKING SAME
09/452,826	01 December 1999	A HIGH BARRIER AMORPHOUS POLYAMIDE-CLAY NANOCOMPOSITE AND A PROCESS FOR PREPARING SAME
09/593,905	14 June 2000	A POLYMER NANOCOMPOSITE COMPRISING A LAYERED CLAY MATERIAL MODIFIED WITH AN ALKOXYLATED ONIUM COMPOUND
09/583,120	30 May 2000	A POLYMER NANOCOMPOSITE COMPRISING A MATRIX POLYMER AND A LAYERED CLAY MATERIAL HAVING A LOW QUARTZ CONTENT
09/728,954	01 December 2000	A POLYMER-CLAY NANOCOMPOSITE COMPRISING AN AMORPHOUS POLYMER OR OLIGOMER

09/870,929

30 May 2001

A POLYMER NANOCOMPOSITE  
COMPRISING A MATRIX POLYMER AND A  
LAYERED CLAY MATERIAL HAVING A  
DECREASED LEVEL OF EXTRACTABLE  
MATERIAL

60/225,499

15 August 2000

NOVEL PROCESSES FOR REDUCING HAZE  
IN ARTICLES MADE FROM A POLYMER  
NANOCOMPOSITE COMPRISING A  
MATRIX POLYMER AND A LAYERED  
CLAY MATERIAL

10/052,722

18 January 2002

PROCESS FOR PREPARING HIGH BARRIER  
NANOCOMPOSITES

10/072,759

08 February 2002

OLIGOMER COMPRISING AN AMMONIUM  
GROUP

10/092,128

06 March 2002

PROCESS FOR PREPARING HIGH BARRIER  
NANOCOMPOSITES

10/145,833

14 May 2002

PROCESS FOR PREPARING AN  
EXFOLIATED, HIGH I.V. POLYMER  
NANOCOMPOSITE WITH AN OLIGOMER  
RESIN PRECURSOR AND AN ARTICLE  
PRODUCED THEREFROM